

## **Notes to the MCEV interim financial statements**

### **1. Basis of preparation**

#### Overview

The supplementary information on pages 57 to 70 has been prepared on a Market Consistent Embedded Value ("MCEV") basis except for the items described further below.

The asset management and management service businesses are included in the Group MCEV at the value of IFRS net assets and do not include the future earnings from their existing business. This is because, in the opinion of the Directors, applying the CFO Forum MCEV principles and guidance to these businesses would not provide a fair reflection of the Group's financial position.

The MCEV methodology adopted by the Group is in accordance with the MCEV principles and guidance published by the CFO Forum in October 2009, except that:

- risk-free rates have been defined as the annually compounded UK government nominal spot curve plus ten basis points rather than as a swap rate curve;
- no allowance for the cost of residual non-hedgeable risk ("CNHR") has been made because, in the opinion of the Directors, the Group operates a robust outsourcer model in terms of operational risk, does not write new business, is focussed entirely on the back book, and has succeeded in closing out significant legacy risks. The theoretical value of CNHR is disclosed separately in note 1 (b); and
- the asset management and management service companies are calculated on an IFRS basis. Under CFO Forum principles and guidance productivity gains should not be recognised until achieved. This treatment is inconsistent with the cost profile of a closed fund where continual cost reductions are expected to maintain unit costs as the business runs off. In the opinion of the Directors, if the MCEV principles and guidance were to be applied to the asset management and the management service companies, it would not provide a fair reflection of the Group's financial position. These companies are therefore reported alongside the Group's other non-life holding companies at their IFRS net asset value.

Whilst the IFRS consolidated financial statements consolidate the results of the Pearl businesses for the period from acquisition on 28 August 2009, the MCEV treats the Pearl businesses as having been acquired on 1 January 2009. For this reason the results for the half year ended 30 June 2009 and year ended 31 December 2009 are referred to as pro forma.

#### Covered business

The MCEV calculations cover all long-term insurance business written by the Group, but exclude Ignis Asset Management and the management service companies.

Opal Re is included within covered business and is valued on a basis consistent with the annuity business within the life companies.

#### MCEV methodology

The embedded value of covered business is based on a market-consistent methodology. Under this methodology, assets and liabilities are valued in line with market prices and consistently with each other.

The key components of MCEV are net worth plus the value of in-force covered business.

##### *a) Net worth*

For the Group's life companies, net worth is defined as the market value of shareholder funds plus the shareholders' interest in surplus assets held in long-term business funds less the market value of any outstanding debt of the life companies.

Loans from the life companies' shareholder funds to holding companies have been consolidated out such that they do not appear as an asset in the life company nor as a liability in the holding company. This presentation has no impact on the overall MCEV but does affect the allocation of net assets between covered and non-covered business.

*b) Value of in-force business ("VIF")*

The value of in-force covered business consists of the following components:

- present value of future profits;
- time value of financial options and guarantees; and
- frictional costs of required capital.

The market consistent VIF represents the present value of profits attributable to shareholders arising from the in-force business, less an allowance for the time value of financial options and guarantees embedded within life insurance contracts and frictional costs of required capital.

The approach adopted to calculate VIF combines deterministic and stochastic techniques (each of which is discussed in more detail below):

- deterministic techniques have been used to value cash flows whose values vary in a linear fashion with market movements. These cash flows are valued using discount rates that reflect the risk inherent in each cash flow. In practice, it is not necessary to discount each cash flow at a different discount rate, as the same result is achieved by projecting and discounting all cash flows at risk-free rates. This is known as the "certainty equivalent approach"; and
- stochastic techniques have been used to value cash flows that have an asymmetric effect on cash flows to shareholders. Here, the calculation involves the use of stochastic models developed for the purposes of realistic balance sheet reporting.

*Present value of future profits ("PVFP")*

The present value of future profits represents the present value of profits attributable to shareholders arising from the in-force business. The PVFP is calculated by projecting and discounting using risk-free rates, with an allowance for liquidity premiums where appropriate.

The projection is based on actively reviewed best estimate non-economic assumptions. Best estimate assumptions make appropriate allowance for expected future experience where there is sufficient evidence to justify; for example in allowing for future mortality improvements on annuity business.

#### Time value of financial options and guarantees (“TVFOGs”)

The Group’s embedded value includes an explicit allowance for the time value of financial options and guarantees embedded within insurance contracts, including investment performance guarantees on participating business and guaranteed vesting annuity rates. The cost of these options and guarantees to shareholders is calculated using market-consistent stochastic models calibrated to the market prices of financial instruments as at the period end.

The TVFOGs allow for the impact of management actions, consistent with those permitted by the Principles and Practices of Financial Management. The modelling of management actions vary for each of the funds but typically include management of bonus rates and policy enhancements, charges to asset share to cover increases to the cost of guarantees and alterations to investment strategy.

#### Frictional cost of capital (“COC”)

Cost of capital is defined as the difference between the market value of shareholder-owned assets backing required capital and the present value of future releases of those assets allowing for future investment returns on that capital, investment expenses and taxes.

For the Group, required capital is defined as the greater of:

- the amount of capital required to meet the FSA capital adequacy requirements, consisting of the greater of Pillar 1 and Pillar 2 capital requirements where:
  - under Pillar 1, the life companies are required to maintain excess capital in excess of policy liabilities calculated using a basis specified by the FSA; and
  - under Pillar 2, the life companies are required to carry out and submit their own assessment of capital requirements by assessing the major risks they are running and the capital they need to ensure that they remain able to meet their liabilities to policyholders in all but the most extreme circumstances;
- the capital required under the Group’s capital management policy.

On this basis the required capital measure is 120 percent (31 December 2009: 125 percent) of the solvency capital at which the regulator is empowered to take action.

Solvency II will introduce a new capital regime for insurers during 2012. These disclosures do not take account of the impact of the change in regime as this is still under development.

#### Cost of residual non-hedgeable risks (“CNHR”)

The CNHR should allow for risks that can have an asymmetric impact on shareholder value to the extent these risks have not already been reflected in the PVFP or TVFOGs. The majority of such risks within the Group are operational and tax risks.

No allowance for the CNHR has been made, as in the opinion of the Directors, the CNHR calculated in accordance with CFO Forum principles and guidance does not anticipate further risk management actions and therefore does not provide a fair reflection of the Group’s ongoing risk.

However, the CNHR calculated in accordance with the CFO Forum principles and guidance, and therefore without anticipating further risk management actions, is disclosed below.

For with-profits business the CNHR would increase the TVFOGs by £64 million (31 December 2009: £93 million).

For other business the cost would be £137 million ((31 December 2009: £141 million). This equates to an equivalent average cost of capital charge of 1.5 percent (31 December 2009: 1.6 percent). The level of capital assumed in this calculation is determined based on a 99.5 percent confidence level over a one year time horizon, consistent with the ICA methodology. Allowance is made for diversification benefits between non-hedgeable risks, but not between hedgeable and non-hedgeable risks.

#### *c) Valuation of debt*

Listed debt issued by the Group is valued at the market value quoted at the reporting date which is consistent with MCEV principles.

The National Provident Life Limited Securitised Bonds are backed by surpluses that are expected to emerge on blocks of its unit-linked and unitised with-profits business. This securitisation has been valued on a cash-flow basis, allowing for payments expected to be due based on the projected level of securitised surpluses emerging. The full VIF of the securitised unit-linked and unitised with-profits business is expected to be payable to bondholders; therefore, no additional value accrues to the embedded value.

Unlisted debt owed by the holding companies is included at face value.

*d) Taxation*

Full allowance has been made for the value of tax that would become payable on the transfer of surplus assets out of non-profit funds. This allowance reflects the projected pace of releases of surplus from non-profit funds that is not required to support with-profits funds.

Allowance has also been made for the tax relief arising from interest payments made on the debt of the holding companies. The value of the tax relief is determined by offsetting the tax payable on profits emerging from covered business against the tax relief afforded by interest payments on the debt. Interest payments are projected assuming that current levels of debt are reduced and then refinanced to maintain a long-term level of debt that the Directors consider to be supported by the projected embedded value of the Group's businesses.

The Group MCEV has been calculated based on the current corporation tax rate of 28% and the current VAT rate of 17.5%.

The Group MCEV is not expected to be materially affected by the announced reduction in corporation tax from 28% to 24% and the increase in VAT from 17.5% to 20%

*e) New business*

The MCEV places a value on the profits expected to be earned on annuities arising from policies vesting with guaranteed annuity terms. These policies are excluded from the definition of new business on the basis that the annuity being provided is an obligation under an existing policy and the life companies are already reserving for the cost of these guarantees.

New business includes all other annuities written by the life insurance companies.

*f) Participating business*

Allowance is made for future bonus rates on a basis consistent with the projection assumptions and established company practice.

The time value of options and guarantees used in the calculation of MCEV also allows for expected management action and policyholder response to the varying external economic conditions simulated by the economic scenario generators. Policyholder response has been modelled based on historical experience. Management actions have been set in accordance with each life company's Principles and Practices of Financial Management.

*g) Pension schemes*

The MCEV allows for pension scheme deficits as calculated on an IFRS basis, but no benefit is taken for pension scheme surpluses.

**2. Components of the MCEV of covered business**

	30 Jun 2010 £m	Pro forma 30 Jun 2009 £m	31 Dec 2009 £m	Pro forma 31 Dec 2008 £m
Net worth	<b>1,909</b>	1,773	2,234	1,816
PVFP	<b>2,882</b>	2,568	2,864	2,680
TVFOG	<b>(97)</b>	(192)	(97)	(206)
COC	<b>(229)</b>	(266)	(270)	(209)
	<b>4,465</b>	3,883	4,731	4,081

The net worth of covered business of £1,909 million at 30 June 2010 consists of £534 million of free surplus (31 December 2009: £408 million) in excess of required capital.

### 3. Analysis of covered business MCEV earnings (after tax)

	Half year ended 30 Jun 2010		
	Net worth £m	VIF £m	Total Life MCEV £m
<b>Life MCEV at 1 January 2010</b>	<b>2,234</b>	<b>2,497</b>	<b>4,731</b>
New business value	8	3	11
Expected existing business contribution (reference rate)	51	59	110
Expected existing business contribution (in excess of reference rate)	15	25	40
Transfer from VIF and required capital to free surplus	88	(88)	–
Experience variances	58	16	74
Assumption changes	(10)	(2)	(12)
Other operating variances	(24)	20	(4)
<b>Operating Life MCEV earnings</b>	<b>186</b>	<b>33</b>	<b>219</b>
Economic variances	82	(6)	76
Other non-operating variances	(23)	32	9
<b>Total Life MCEV earnings</b>	<b>245</b>	<b>59</b>	<b>304</b>
Capital and dividend flows	(570)	–	(570)
<b>Life MCEV at 30 June 2010</b>	<b>1,909</b>	<b>2,556</b>	<b>4,465</b>

	Half year ended 30 Jun 2009 (pro forma)		
	Net worth £m	VIF £m	Total Life MCEV £m
<b>Life MCEV at 1 January 2009</b>	<b>1,816</b>	<b>2,265</b>	<b>4,081</b>
New business value	1	10	11
Expected existing business contribution (reference rate)	19	10	29
Expected existing business contribution (in excess of reference rate)	5	13	18
Transfer from VIF and required capital to free surplus	94	(94)	–
Experience variances	(12)	(71)	(83)
Assumption changes	(2)	(4)	(6)
Other operating variances	(13)	28	15
<b>Operating Life MCEV earnings/(loss)</b>	<b>92</b>	<b>(108)</b>	<b>(16)</b>
Economic variances	19	(45)	(26)
Other non-operating variances	(24)	12	(12)
<b>Total Life MCEV earnings/(loss)</b>	<b>87</b>	<b>(141)</b>	<b>(54)</b>
Capital and dividend flows	(130)	(14)	(144)
<b>Life MCEV at 30 June 2009</b>	<b>1,773</b>	<b>2,110</b>	<b>3,883</b>

	Year ended 31 Dec 2009 (pro forma)		
	Net worth £m	VIF £m	Total Life MCEV £m
<b>Life MCEV at 1 January 2009</b>	1,816	2,265	4,081
New business value	18	4	22
Expected existing business contribution (reference rate)	32	27	59
Expected existing business contribution (in excess of reference rate)	10	26	36
Transfer from VIF and required capital to free surplus	181	(181)	–
Experience variances	51	11	62
Assumption changes	165	(92)	73
Other operating variances	(14)	35	21
<b>Operating Life MCEV earnings/(loss)</b>	443	(170)	273
Economic variances	66	438	504
Other non-operating variances	12	(5)	7
<b>Total Life MCEV earnings</b>	521	263	784
Capital and dividend flows	(103)	(31)	(134)
<b>Life MCEV at 31 December 2009</b>	<b>2,234</b>	<b>2,497</b>	<b>4,731</b>

#### 4. New business

The value generated by new business written during the period is calculated as the present value of the projected stream of after tax distributable profits from that business. This contribution has been valued using economic and non-economic assumptions at the point of sale. The value of new business is shown after the effect of frictional costs of holding required capital on the same basis as for the in-force covered business

New business	Premium £m	MCEV £m	MCEV/Premium %
Half year ended 30 Jun 2010	<b>211</b>	<b>11</b>	<b>5%</b>
Half year ended 30 Jun 2009 (pro forma)	209	11	5%
Year ended 31 Dec 2009 (pro forma)	401	22	5%

## 5. Maturity profile of business

This note sets out how the PVFP is expected to emerge into net worth over future years. Surpluses are projected on a certainty equivalent basis with allowance for liquidity premiums as appropriate and are discounted at risk-free rates.

	Years					
	1-5 £m	6-10 £m	11-15 £m	16-20 £m	20+ £m	Total £m
Present value of future profits (PVFP)						
<b>30 Jun 2010</b>	<b>930</b>	<b>791</b>	<b>539</b>	<b>301</b>	<b>321</b>	<b>2,882</b>

## 6. Economic assumptions

### Reference Rates

#### (a) Risk-free rates

Risk-free rates are based on the annually compounded UK government bond nominal spot curve plus ten basis points, extrapolated as necessary to meet the term of the liabilities. Recognising that this is a departure from MCEV principles, a sensitivity based on swap yields is disclosed.

The risk-free rates assumed for a sample of terms were as follows:

Term	30 Jun 2010		30 Jun 2009		31 Dec 2009	
	Gilt Yield +10 bps	Swap Yield	Gilt Yield +10 bps	Swap Yield	Gilt Yield +10 bps	Swap Yield
1 year	0.71%	1.12%	1.20%	–	0.97%	1.02%
5 years	2.36%	2.48%	3.06%	–	3.13%	3.49%
10 years	3.70%	3.55%	3.92%	–	4.35%	4.27%
15 years	4.35%	3.97%	4.45%	–	4.80%	4.55%
20 years	4.59%	4.07%	4.75%	–	4.86%	4.55%

The swap yields above are only applicable to sensitivity (12) as disclosed in note 7. Swap yields have not been supplied for 30 June 2009 as sensitivities have not been disclosed at this date.

#### (b) Liquidity Premiums

In October 2009, the CFO Forum published an amendment to the MCEV principles to reflect the inclusion of a liquidity premium. The changes affirm that the reference rate may include a liquidity premium over and above the risk-free yield curve for liabilities which are not liquid, given that the matching assets are able to be held to maturity.

The liabilities to which a liquidity premium is applied include immediate annuities, pensions policies with benefits defined as an annuity or in-the-money guaranteed annuity options. The liquidity premium is determined by reference to the yield on the bond portfolios held after allowing for credit risk by deducting margins for best estimate defaults and unexpected default risk premiums. The additional yield above risk-free rates implied by the calculated liquidity premium is as follows:

	30 Jun 2010	30 Jun 2009	31 Dec 2009	31 Dec 2008
Additional yield over risk-free rates	0.35%	0.70%	0.30%	0.70%

### Inflation

For purposes of the MCEV calculation, the rate of increase in the UK Retail Price Index ("RPI") as at 30 June 2010 was taken from the implied inflation curve at a term appropriate to the liabilities. The rate of increase in UK National Average Earnings inflation is assumed to be RPI + 100 basis points as at 30 June 2010 (31 December 2009: RPI + 100 basis points).

### Stochastic economic assumptions

The time value of options and guarantees is calculated using an economic scenario generator. The model is calibrated to market conditions as at 30 June 2010. The scenario generator and calibration are consistent with that used for realistic balance sheet reporting.

A Libor Market Model is used to generate risk-free rates over a complete yield curve, calibrated to the UK nominal spot curve plus ten basis points, consistent with the deterministic projections. Interest rate volatility is calibrated to swaption implied volatilities, as per the sample below.

30 Jun 2010 Swap term (years)	Option term (years)					
	5	10	15	20	25	30
5	17.0%	12.3%	12.8%	13.0%	13.0%	12.8%
10	15.3%	12.7%	12.9%	12.8%	12.7%	12.2%
20	14.8%	12.5%	12.3%	11.9%	11.5%	11.0%
30	14.1%	11.8%	11.4%	10.9%	10.5%	10.1%

30 Jun 2009 Swap term (years)	Option term (years)					
	5	10	15	20	25	30
5	15.8%	11.6%	13.0%	14.0%	13.2%	11.9%
10	14.5%	12.2%	13.3%	13.5%	12.4%	11.3%
20	14.7%	12.2%	12.3%	11.8%	10.8%	9.7%
30	14.3%	11.1%	10.8%	10.1%	9.2%	8.4%

31 Dec 2009 Swap term (years)	Option term (years)					
	5	10	15	20	25	30
5	17.0%	13.1%	14.3%	15.1%	15.9%	15.4%
10	15.7%	13.8%	14.8%	15.4%	15.6%	14.7%
20	15.9%	14.1%	14.6%	14.4%	14.0%	13.0%
30	15.7%	13.6%	13.5%	13.0%	12.3%	11.5%

Real interest rates have been modelled using the two-factor Vasicek model, calibrated to index-linked gilts.

Equity volatility is calibrated to replicate the prices on a range of FTSE equity options, and extrapolated beyond terms available in the market. The equity volatility model used allows volatility to vary with both term and the level of the equity index.

Term (years)		5	10	15	20	25	30
<b>Equity implied volatility (ATM)</b>	<b>30 Jun 2010</b>	<b>28.3%</b>	<b>29.2%</b>	<b>29.5%</b>	<b>29.7%</b>	<b>29.9%</b>	<b>29.9%</b>
	30 Jun 2009	27.6%	28.2%	27.9%	27.9%	27.9%	27.9%
	31 Dec 2009	25.3%	26.6%	27.3%	27.5%	27.6%	27.7%

Best estimate levels of volatility are assumed for directly held property. The model implied volatility for 30 June 2010 is 15 percent (31 December 2009: 15 percent).

The modelling of corporate bonds allows for credit transitions and defaults, calibrated to historic data, with an additional allowance for the credit risk premium, derived from current markets.

### Operating earnings

The Group uses normalised investment returns in calculating the expected existing business contribution. In 2009 the expected contribution was calculated using a 1 year gilt forward rate plus the Group's long-term expectations of excess investment returns on equities, properties and bonds. From 2010, the Group considers that an average return over the remaining term of our in-force business is more appropriate than using a short-term rate and is more consistent with the Group's expectation of longer term rates of return. Therefore, the Group has moved to calculating the expected contribution on existing business using a 15 year gilt rate at the beginning of the reporting period plus 10 basis points and long-term expectations of excess investment returns.

The table below sets out the asset risk premiums used:

	Half year ended 30 Jun 2010	Half year ended 30 Jun 2009	Year ended 31 Dec 2009
Equities	3.0%	2.5%	2.5%
Property	2.0%	2.0%	2.0%
Gilts	0.0%	0.0%	0.0%

The return assumed on corporate bond portfolios is the redemption yield for the portfolio less an allowance for credit risk.

### Expenses

Each life company's projected per policy expenses are based on existing management services agreements with the Group's service companies, adjusted to allow for additional costs incurred directly by the life companies, including, for example, regulatory fees and one-time expenses.

The life companies' projected investment expenses are based on the fees agreed with Ignis Asset Management, (or external fund managers, where appropriate), allowing for current and projected future asset mixes.

### Valuation of debt and non-controlling interests

The Group's condensed consolidated balance sheet as at 30 June 2010 includes Perpetual Reset Capital Securities with a face value of £425 million (31 December 2009: £500 million) and subordinated debt with a face value of £200 million in relation to Phoenix Life Limited (ex Scottish Mutual Assurance). These listed securities have been included within the MCEV at their market value quoted at the reporting date.

The table below summarises the value of these debt obligations as at 30 June 2010.

	30 Jun 2010		30 Jun 2009		31 Dec 2009	
	Face value (including accrued interest)	Market value	Face value (including accrued interest)	Market value	Face value (including accrued interest)	Market value
Listed debt and non-controlling interests						
Perpetual Reset Capital Securities	452	267	528	110	540	264
Phoenix Life Limited subordinated debt	215	163	216	112	211	156

Unlisted debt has been included at face value.

	30 Jun 2010 Face value	30 Jun 2009 Face value	31 Dec 2009 Face value
Unlisted debt			
Pearl and Impala facilities	2,738	3,085	2,760
Royal London PIK note and facility	104	346	102

## 7. Sensitivity to assumptions

The table below summarises the key sensitivities of the MCEV of covered business at 30 June 2010:

	<b>30 Jun 2010 Life MCEV £m</b>
(1) Base	<b>4,465</b>
(2) 1% decrease in risk-free rates	<b>188</b>
(3) 1% increase in risk-free rates	<b>(230)</b>
(4) 10% decrease in equity/property market values	<b>(148)</b>
(5) 100 bps increase in credit spreads <sup>1</sup>	<b>(311)</b>
(6) 25% increase in equity/property implied volatilities	<b>(31)</b>
(7) 25% increase in swaption implied volatilities	<b>(33)</b>
(8) 10% decrease in lapse rates and paid-up rates	<b>(19)</b>
(9) 5% decrease in annuitant mortality	<b>(171)</b>
(10) 5% decrease in non-annuitant mortality	<b>21</b>
(11) Required capital equal to the minimum regulatory capital	<b>67</b>
(12) Swap curve as reference rate, retaining appropriate liquidity premiums	<b>(312)</b>

<sup>1</sup> 44 bps is assumed to relate to default risk

No expense sensitivity has been shown as maintenance costs incurred by the covered business are largely fixed under the terms of agreements with the management services companies.